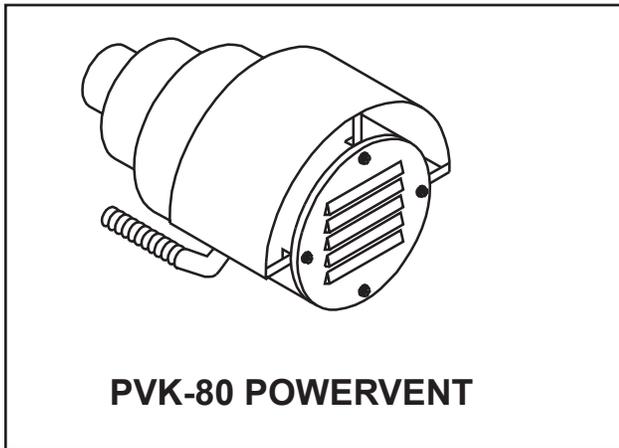


## PVK-80 Power Vent

- Installation Instructions -



**IMPORTANT:** Failure to read and follow these instructions may create a possible hazard and will void the fireplace warranty.

**THESE INSTRUCTIONS MUST REMAIN WITH THE EQUIPMENT.**

### INTRODUCTION

Model PVK-80 Power Vent can be used on direct vent gas fireplaces manufactured by Hearth & Home Technologies.

Any gas fireplace fitted with the PVK-80 Power Vent must utilize DSI (direct spark ignition) or IPI (intermittent pilot ignition) fireplace gas controls. Fireplaces equipped with millivolt type gas controls **CANNOT** use this power vent.

Tables 2 and 3 list the type and size of vent pipe, maximum number of 90° elbows, maximum total vent pipe run, and maximum vertical drop allowed when using this power vent.

The PVK-80 Power Vent operates on 120VAC, 60Hz electrical service which is supplied at the fireplace junction box.

### INSTALLATION PRECAUTIONS

1. This device must be installed by a qualified installer in accordance with these instructions.
2. Safety inspection of the venting system should be performed before and after installation of this power vent. Consult local code officials and follow applicable installation codes.
3. **DO NOT INSTALL DAMAGED EQUIPMENT OR VENT COMPONENTS.**
4. Disconnect electrical power supply before making wiring connections.

5. **VENTING OF MORE THAN ONE APPLIANCE IN A COMMON VENT SYSTEM IS PROHIBITED.**
6. **CLEARANCES BETWEEN THE VENT PIPE AND COMBUSTIBLE MATERIALS MUST BE MAINTAINED AT 3 INCH TOP, 1- INCH SIDES, AND 1 INCH BOTTOM.**

**CAUTION:** Failure to install, operate, and maintain the power venting system in accordance with manufacturer's instructions will result in conditions which may produce bodily injury and/or property damage.

**NOTICE:** The blower motor present in this powervent will generate sound during operation. The effects of the increased sound level can be minimized with careful planning during installation of the system.

### INSTALLATION OF PVK-80 POWER VENT

**NOTICE:** Some fireplace models may have unique venting and/or wiring requirements when used with the PVK-80. In those cases, PVK-80 instructions those manuals supersede these instructions.

1. Location of venting system terminations must be made in accordance with national, provincial, and/or local codes. The minimum clearance requirements must be followed on models using the PVK-80 Power Vent.
  - A. The exit termination of mechanical draft systems shall not be less than 7 feet above grade when located adjacent to public walkways and at least 10 feet from lot line or adjacent buildings.
  - B. A mechanical drafting venting system shall terminate at least 3 feet above any forced air inlet located within 10 feet.
  - C. The venting system of direct vent appliances shall terminate at least 12 inches below, 12 inches horizontally from, or 12 inches above any building opening through which flue gases could enter.
  - D. The vent termination point shall not be installed closer than 2 feet from an inside corner of an L-shaped structure.
  - E. The vent termination should not be mounted directly above or within 3 feet horizontally from an oil tank vent or gas meter.
  - F. The bottom of the vent termination shall be located at least 2 feet above the finished graded and 2 feet above any combustible projection.

**Note:** The PVK-80 Power Vent must terminate in a **HORIZONTAL** position. See Figure 2.

2. Install vent system components per planned vent run. Route the vent pipe from the fireplace to the PVK-80 Power Vent using the minimum number of elbows possible. Refer to Tables 2 and 3 for vent specifications per size of vent pipe used.

**Commercial, Multi-family (Multi-level exceeding two stories), or High-Rise Applications**

All outer pipe joints must be sealed with high temperature silicone, including the slip section that connects directly to the horizontal termination cap.

- Apply a bead of silicone sealant inside the female outer pipe joint prior to joining sections. See Figure 1.
- Only outer pipes need to be sealed. All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed in this manner, unless otherwise stated.

**WARNING! Risk of Fire or Explosion! DO NOT break silicone seals on slip sections. Use care when removing termination cap from slip pipe. If slip section seals are broken during removal of the termination cap, vent may leak.**

**Note:** Most direct vent fireplaces can use either 4 in./6-5/8 in. or 5 in./8 in. direct vent pipe components when using the PVK-80 and conforming to the parameters in Tables 2 and 3 in Figure 17.

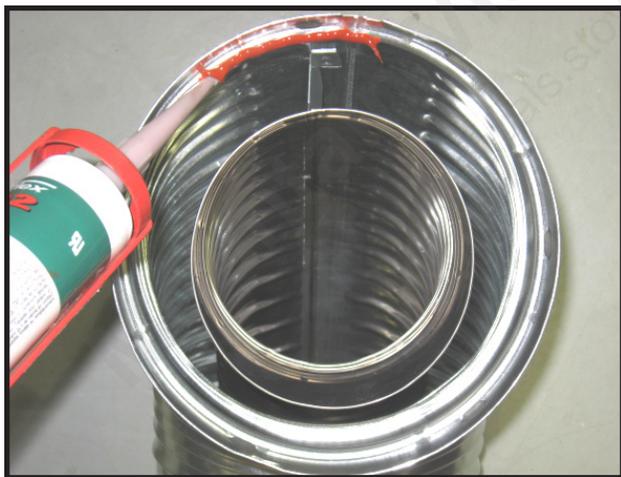


Figure 1. High Temperature Silicone Sealant

3. A vent pipe adaptor must be installed on the fireplace vent collars if a smaller vent pipe than the fireplace starting collars is to be used in the vent system. Adaptors are also used to connect the last smaller vent system component to the power vent cap. **SEE TABLE 1 FOR ADAPTOR DESCRIPTIONS.**

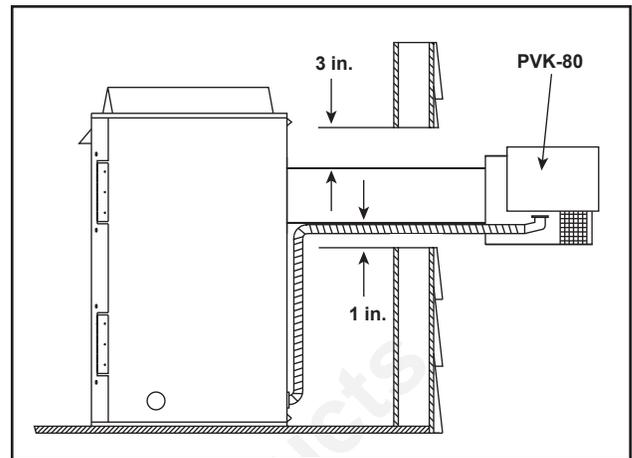


Figure 2.

4. After determining the location of the vent system termination point (see Step 1) cut a 10 in. X 10 in. square hole (for 4 in./6 in. diameter pipe) or a 10 in. X 12 in. rectangular hole (for 5 in./8 in. diameter pipe) through the wall or roof. Apply the adhesive back fiberglass tape to the last vent system component 1-1/4 in. from the edge. Firmly press the tape on to the venting and fold the extra tape inside the venting. See Figure 3. Mount and attach the power vent to the last vent system component. The exhaust port of the PVK-80 cap **MUST** be pointed down. Fasten the last horizontal vent section to the exterior firestop with a sheetmetal screw through the flange (5 in./8 in. diameter pipe) or pipelock tab (5 in./8 in. diameter pipe) and into the vent pipe. See Figure 4.

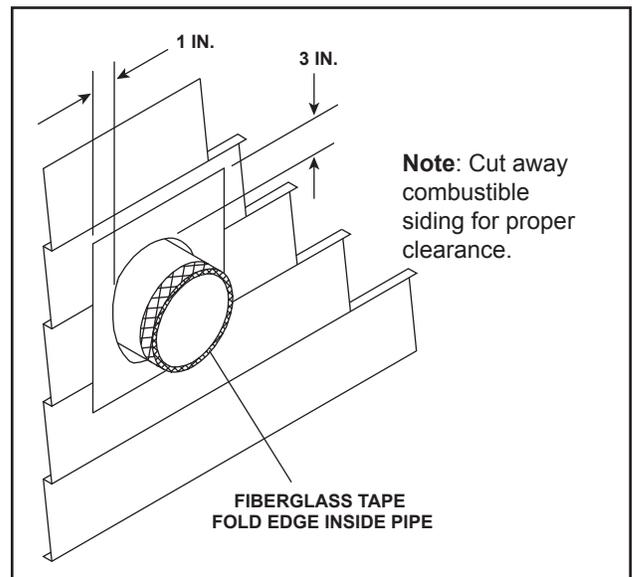


Figure 3.

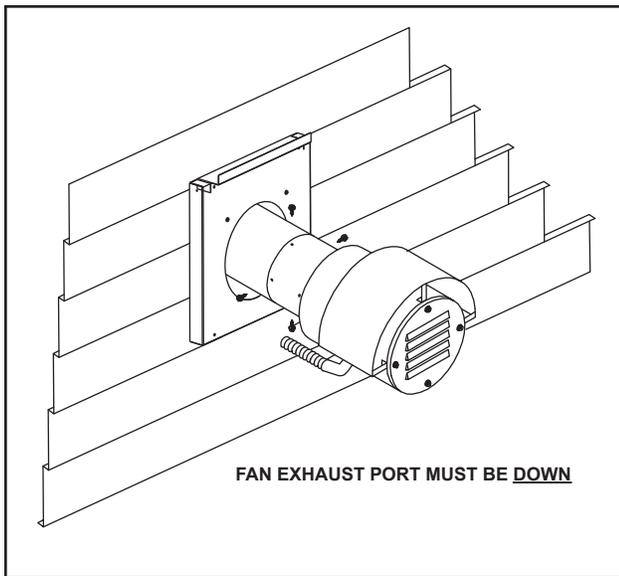


Figure 4.

**Note:** A wall firestop is included with the PVK-80 Power Vent kit. The firestop must be used when penetrating the exterior wall. If additional interior walls are penetrated, additional firestops must be used. Firestops MUST be used whenever a section of vent pipe passes through a combustible wall.

Firestops:

Description	HHT Part #
DVP (8 in. pipe)	DVP-WS
SLP (6-5/8 in. pipe)	DVP-WS

5. The minimum distance from the outside wall to the end of the top shield of the PVK-80 horizontal cap is 14-1/2 inches. The maximum distance is 21 inches. See Figure 5.

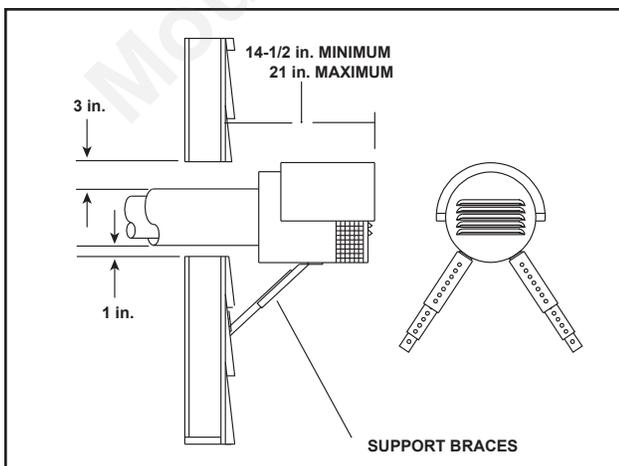


Figure 5.

6. Two support braces are provided and MUST be used to mount the PVK-80 horizontal cap to the wall. Screw one end of each brace to the bottom of the cap housing, using the pilot holes in the cap. Extend each brace until it contacts the building wall and tighten the bolt/nut in the center of each brace. Fasten the other end of each brace to the outside wall. See Figure 5.

## WIRING THE POWER VENT

**Notice:** Electrical wiring must be done in accordance with national, provincial, and/or local electric codes.

**Notice:** Some fireplace models may have unique wiring requirements when used with the PVK-80. In those cases, PVK-80 instructions those manuals supersede these instructions.

**WARNING: Risk of Shock!** Before performing any maintenance, repair, or electrical wiring to the fireplace/power vent, make sure the electrical power is first disconnected to the fireplace/power vent.

1. A 7/8 in. diameter hole must be bored in the side of the fireplace outer wrap in which the 5 wires from the power vent will be routed. The hole should be located 2 inches to the side of the junction box and 4 inches up from the base of the fireplace. See Figure 6.

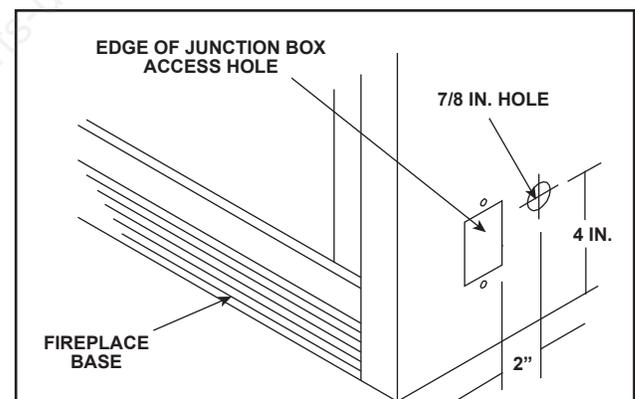


Figure 6.

**Note:** The PVK-80 Power Vent includes a 6-1/2 foot 5-wire assembly wired into the vent cap fan motor. If this wire assembly will not reach the fireplace, the wires may need to be spliced to additional wire lengths in a junction box installed inside the building. Follow applicable electric codes.

2. Place the PVK-80 terminal block/wiring harness assembly in the cavity under the fireplace next to the valve assembly.

- Route the 6 wires from the power vent through the 7/8 inch diameter hole bored in the fireplace wrap, using a strain relief connector to secure the wires in place. Connect the black, white, brown and red wires from the power vent assembly to the terminal block. Connect the green wire to the ground stud of the junction box.

**CAUTION: Make sure the cable is NOT in the path of the hot exhaust air. This will cause the wire insulation to melt and the PVK-80 to malfunction.**

**CAUTION: Carefully match the corresponding colored wires to the appropriate position on the terminal block. See Figure 7.**

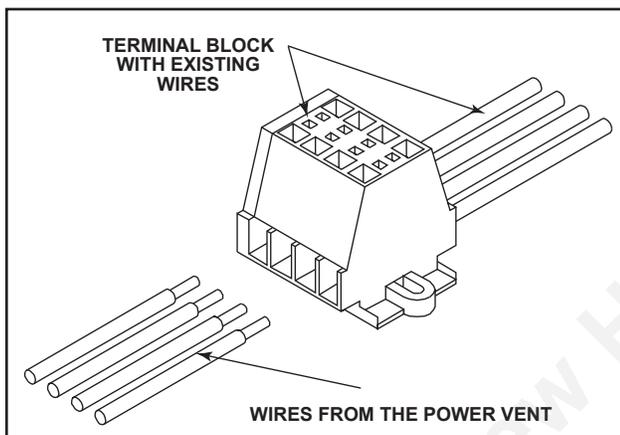


Figure 7.

**Note:** To insert a wire into the terminal block use a blunt object such as a needle nose pliers and depress the spring loaded pin on the top of the block and at the same time insert the wire into the side of the terminal block. Release the pin to secure the wire in place.

- Remove any cover or plate protecting valve and module wiring assembly or switch.
- Unplug two brown wires on the green module and plug into red and brown wires from wiring harness terminal block.

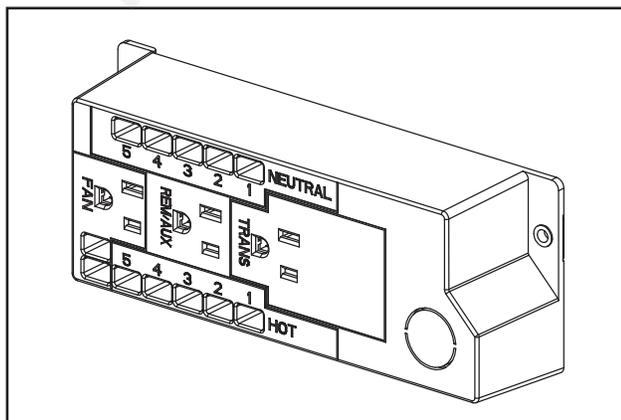


Figure 8.

**Notice:** Electrical service of 120 VAC-60Hz must be supplied to the junction box of the fireplace in order for the power vent to operate correctly.

## Service Parts List

Description	Part Number
Power Vent Cap Assembly	2026-018
Blower Power Vent	655-500
Vacuum Switch*	2196-326
Wire Harness Water Proof	655-531A
Power Vent Support Bottom	655-100
Power Vent Support Top	655-101
Wire Harness	2065-112
10" Wire Assembly	2065-114
Firestop	2045-006
Hardware Bag	655-900A

\*If PVK-80 was purchased before 12/15/2009, the 655-135 bracket must also be replaced.

- Plug one end of the black wire harness into one of the HOT terminals on the junction box. Plug the other female end into the back of the rocker switch, where the brown wires were removed in Step 5.
  - Plug the white wire from the terminal block harness into one of the NEUTRAL terminals of the junction box.
  - Plug the black wire from the terminal block harness into the back of the rocker switch.
- WARNING: Risk of Shock! ON/OFF switch and remote wires are high voltage (120 VAC). Use proper wire.**
- Attach terminal block to base of fireplace using Velcro pads provided.
  - Remove battery box unplugging red and black wires. (Battery backup will not work with PVK-80 installed.)
  - Replace any covers or plates removed in Step 4.
  - Cable tie the wires together so that no wire is in contact with the top of the cavity under the fireplace.
  - Reconnect electrical power supply to the junction box.

## INSTALLATION INSPECTION

1. Follow safety inspection procedures recommended by national, provincial, and/or local codes.
2. Be certain all electrical connections are properly made and secure.
3. Visually inspect the vent system and determine that there is no flue gas spillage, blockage or restriction, leakage, corrosion or other unsafe deficiencies.
4. Place the fireplace in operation and determine that the burner and power vent are operating properly. The main burner should show no signs of floating, lifting, or flashbacks.

**WARNING: Risk of Fire! Risk of Shock!** If any unsafe condition is determined when inspecting the installation and operation of the fireplace and power vent, the equipment should be shut off. Corrections **MUST** be made before the equipment is put into continuous operation.

## SETTING THE EXHAUST CONTROL

The PVK-80 has an exhaust control lever which must be set and secured during the Installation Inspection. The lever is located behind the electrical cable connector of the cap housing and is factory set in the closed position. See Figure 9.

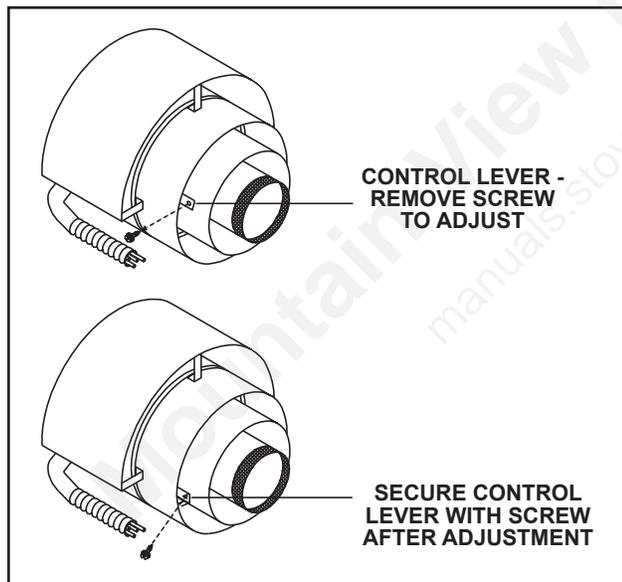


Figure 9.

The need to adjust the exhaust control will depend upon fireplace combustion box volume, vent run configuration, and **MOST IMPORTANT** - burner flame characteristics.

Leave control lever in the closed position when first operating the appliance during the Installation Inspection.

- If the burner flames are short, active, and jumping - remove the lever screw and slightly close the exhaust control. Check the burner flames and adjust the lever again, as necessary, until the flames are stable, strong, and steady.
- If the burner flames are tall, lifting, floating, and ghost-like the exhaust control is closed too far and **MUST** be opened.

When the burner flames have been optimized, secure the exhaust control lever to the power vent housing with the sheetmetal screw. **DO NOT CHANGE THIS SETTING.**

## OPERATING INSTRUCTIONS

After installation of the power vent, follow the operation instructions of the fireplace.

1. Turn the fireplace ON/OFF switch to "ON".

**NOTE:** During periods of operation after turning the fireplace "ON", there may be a slight delay before the fireplace ignites. This is due to the time necessary for the fan to reach operating speed and to remove any gases from the combustion chamber.

2. After turning the switch to the "ON" position, if the fireplace does not turn on, shut the switch to "OFF" and inspect the power vent system for any debris that may be obstructing the fan blade movement.
3. Turn the fireplace ON/OFF switch to "OFF" to turn off the burner and the power vent.

## MAINTENANCE

**WARNING! Risk of Shock!** Before performing any maintenance or repair to the power vent assembly, make sure electrical power is disconnected to the fireplace.

1. Vent System: Inspect all components and connections annually. Replace, seal, or tighten pipe connections if necessary.
2. Power Vent Cap: Inspect at least annually, to clear away any debris blocking any part of the cap.
3. Motor: The fan motor bearings are sealed and no further lubrication is necessary.

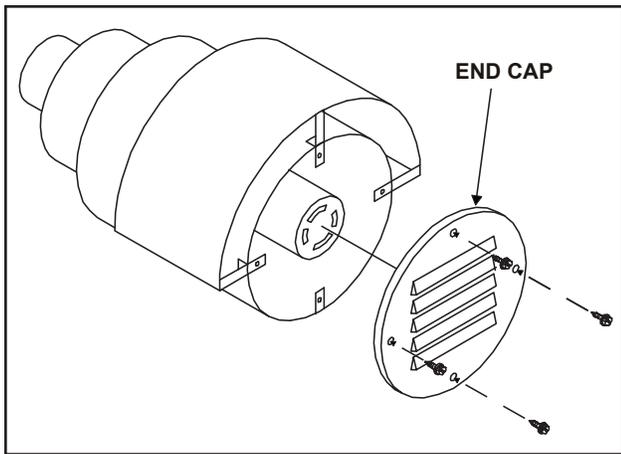


Figure 10.

## REPLACEMENT PARTS

Replacement parts can be obtained from your dealer. Repair of the PVK-80 Power Vent should only be done by a qualified service person.

### 1. ACCESS TO THE VACUUM SWITCH, TEFLON TUBING, AND FAN MOTOR:

- Turn power to off. Remove end cap by removing the four (4) sheetmetal screws. See Figure 10.
- Unplug the two wires connected to the vacuum switch and the two wires connected to the fan motor.
- Loosen and remove the nut for the right angle connector and carefully pull back the cable to remove the four (4) wires from the power vent assembly.
- With the cable loosened from the power vent assembly, remove the sheetmetal screws used to secure the power vent assembly in place. Firmly support the assembly to prevent the unit from falling after the sheetmetal screws have been removed. See Figure 11.

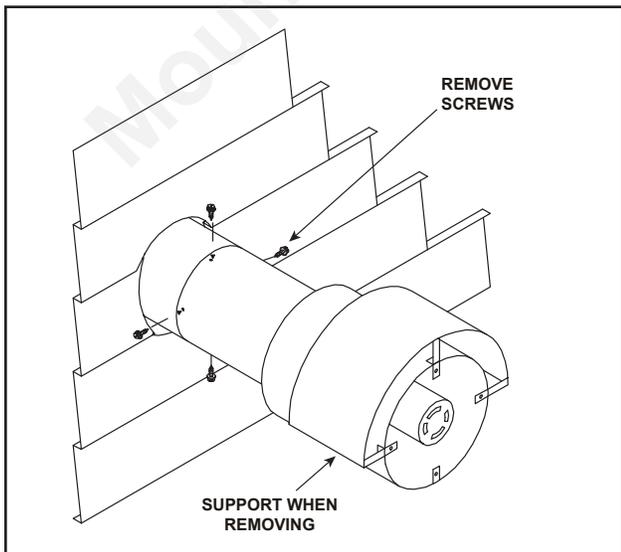


Figure 11.

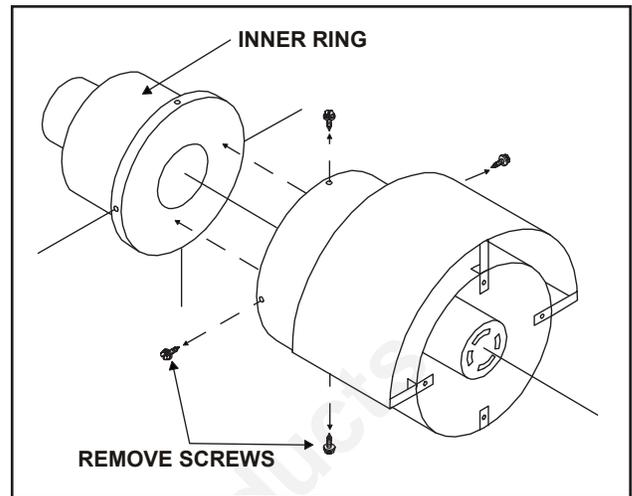


Figure 12.

- Remove the sheetmetal screws from the 10-1/2 in. diameter pipe and remove the inner ring from inside the collar. See Figure 12.

**IMPORTANT:** Take special note of the orientation of the two part assembly. The inner ring must be returned to its original position for correct power vent operation.

- Remove the wire mesh that is covering the exhaust port hole by removing the 4 sheetmetal screws.
- Bend the metal guide plate at the exhaust port hole out and through the hole on the 10-1/2 in. diameter collar. See Figure 13.

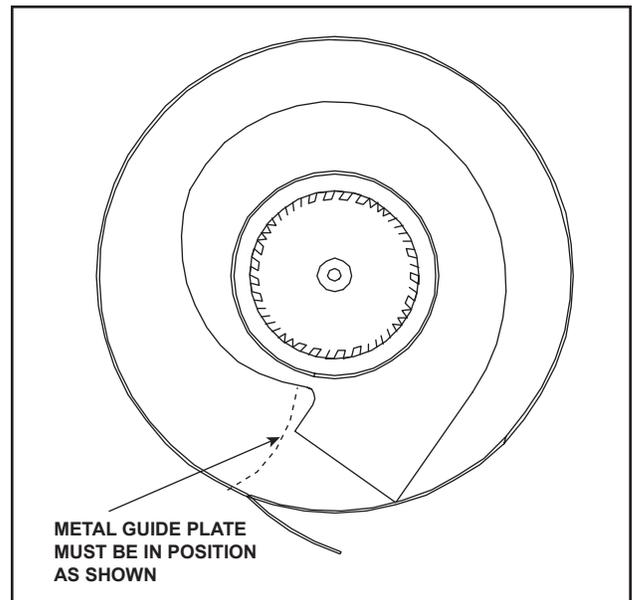


Figure 13.

**NOTE:** On some caps, the metal guide plate is attached to the wire mesh and will slide out with the mesh.

- Slide the blower assembly out of the 10-1/2 in. diameter collar for maintenance or replacement.

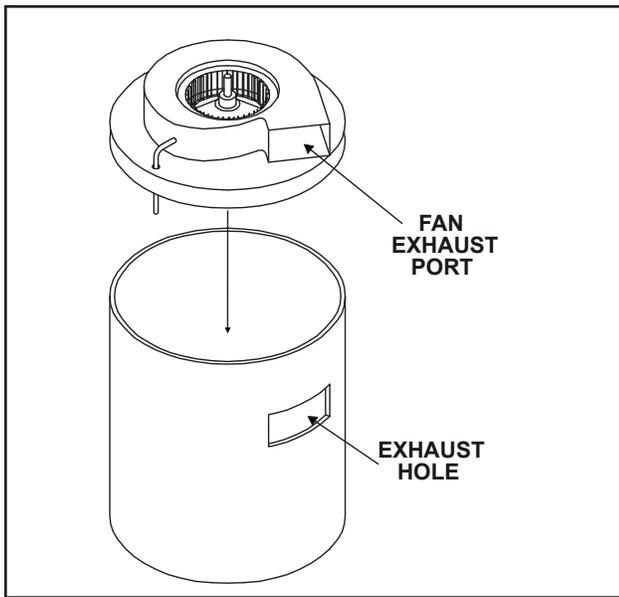


Figure 14.

## 2. TO REASSEMBLE THE POWER VENT:

- A. Slide the blower assembly into the 10-1/2 in. diameter collar, making sure that the exhaust port on the blower assembly lines up with the exhaust hole cut in the 10-1/2 in. diameter collar. See Figure 14.
- B. The metal exhaust guide plate will have to be bent back inside the blower assembly. See Figure 15.

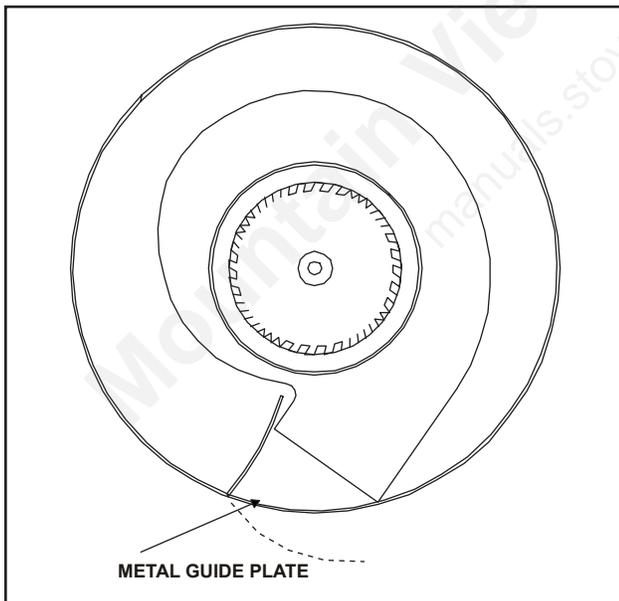


Figure 15.

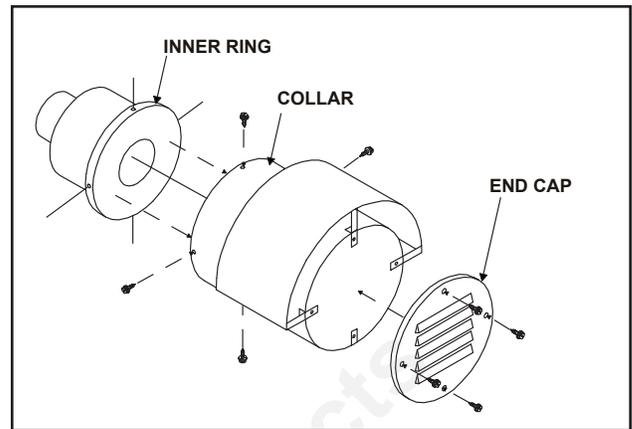


Figure 16.

- C. Fasten the wire mesh to the 10-1/2 in. collar to cover the exhaust port hole, using (4) sheetmetal screws.
- D. Slide the inner ring inside the cap assembly, carefully positioning the inner ring to its original orientation. See Figure 16. Carefully align the screw holes on the 10-1/2 in. diameter collar and the inner ring.

**NOTE:** This inner ring must be returned to its correct orientation with the 10-1/2 in. collar for proper blower operation.

- E. Secure the cap assembly to the last vent pipe section. Position the power vent assembly with the exhaust air directed downward to ensure proper operation.
- F. Feed the four (4) wires back through the hole on the collar and tighten the nut on the right angle connector. Reconnect the brown and red wire to the vacuum switch and connect the black and white wires to the fan motor.

**NOTICE:** Make sure the cable is NOT in the path of the hot exhaust air. Wire insulation can melt causing the power vent to malfunction.

- G. Reattach the end cap to the cap assembly with four (4) sheet metal screws. Position the end cap with the louvers pointed downward (horizontal termination).
- H. Reconnect the electrical power to the fireplace and turn the fireplace ON/OFF switch "ON" to ensure proper operation of the fireplace and power vent.

Table 1

<b>ADAPTOR KITS</b>	
<b>PART NUMBER</b>	<b>PART DESCRIPTION</b>
SL-2DVP	Adapts from 4 in./ 6-5/8 in. SL D-series starting collars to 5 in./ 8 in. DVP vent pipe.
DVP-2SL	Adapts from 5 in./ 8 in. DVP-series starting collars to 4 in./ 6-5/8 SL D-series vent pipe.

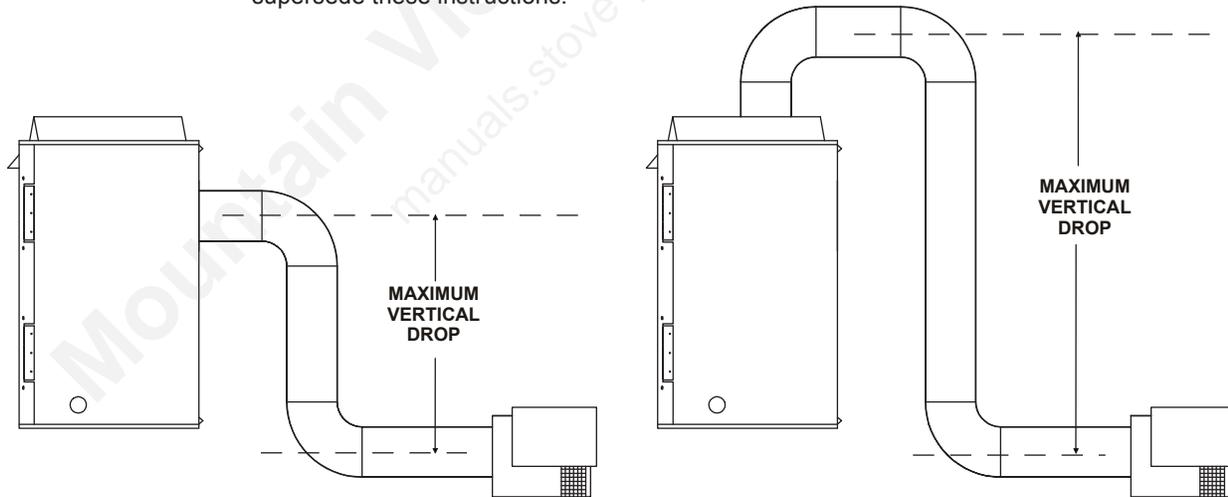
Table 2

<b>DIRECT VENT WITH 4 in./ 6-5/8 in. DIAMETER SL-D PIPE</b>		
<b>MAX. ELBOWS (45° &amp; 90°)</b>	<b>MAX. TOTAL VENT RUN (FT.)</b>	<b>MAX. VERT. DROP (FT.)</b>
6	90'	12'

Table 3

<b>DIRECT VENT WITH 5 in. / 8 in. DIAMETER DVP PIPE</b>		
<b>MAX. ELBOWS (45° &amp; 90°)</b>	<b>MAX. TOTAL VENT RUN (FT.)</b>	<b>MAX. VERT. DROP (FT.)</b>
10	90'	12'

**Note:** Some fireplace models may have unique wiring requirements when used with the PVK-80. In those cases, PVK-80 instructions those manuals supersede these instructions.



**NOTE:** Maximum total vent run= Total vertical vent run + Total horizontal vent run

Figure 17.

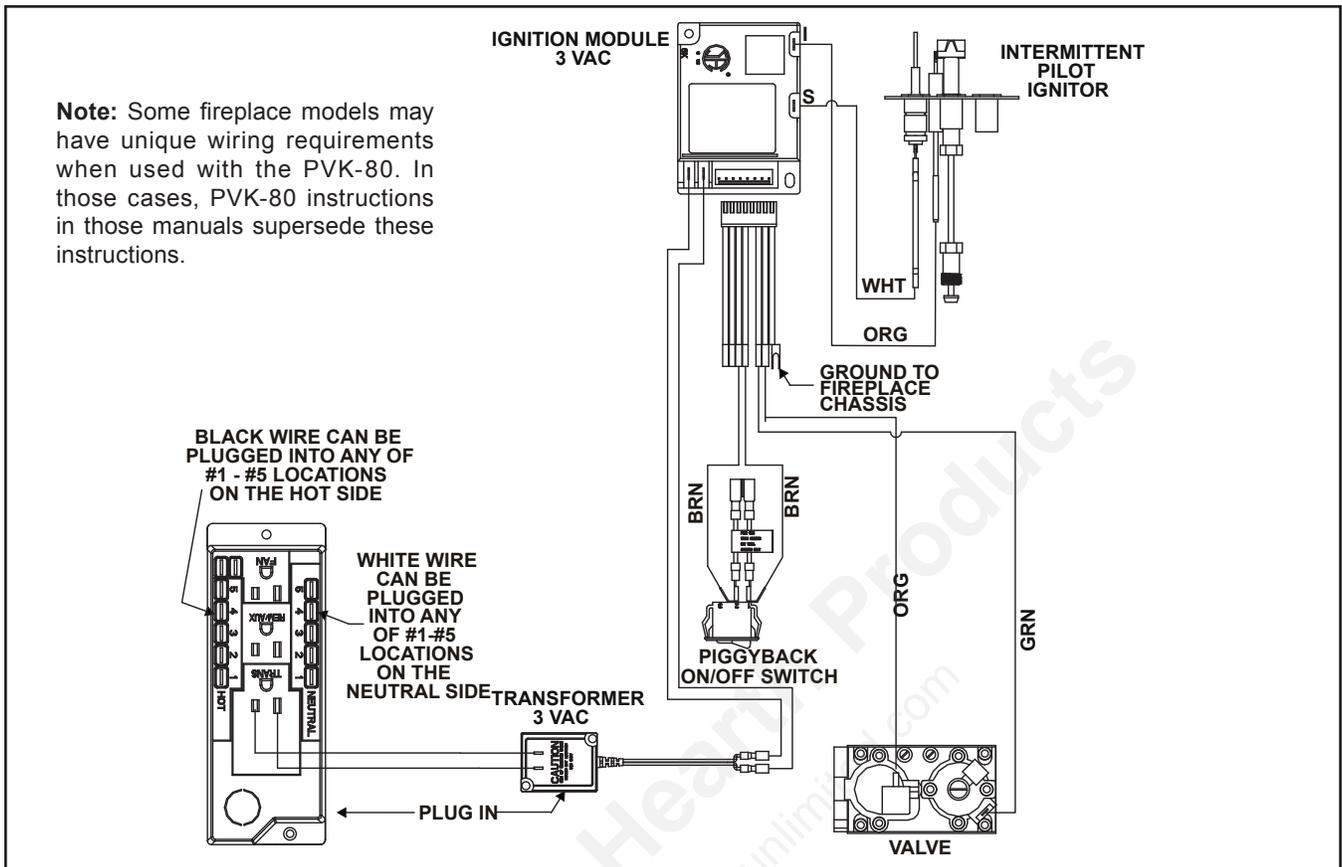


Figure 18. IPI Wiring Diagram For Fireplace (System 4)

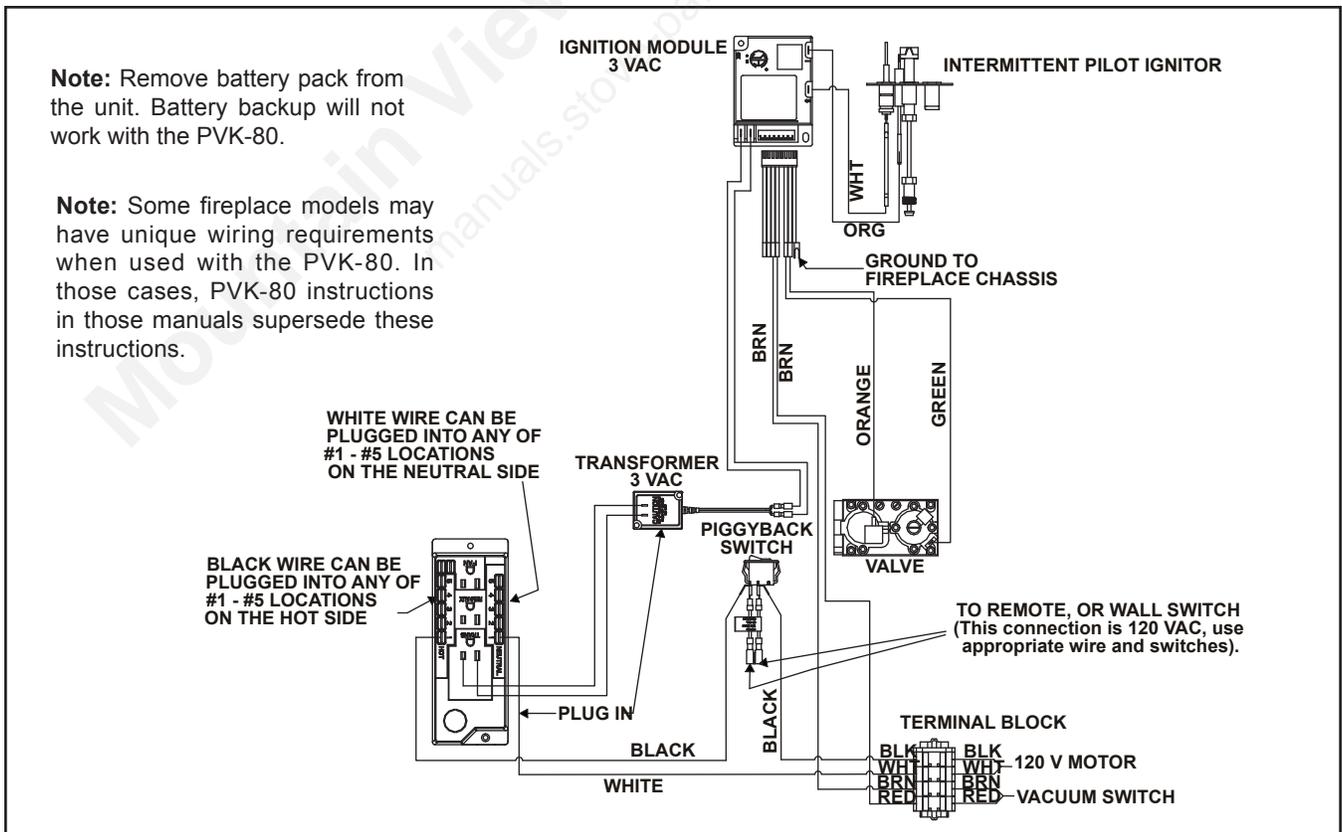


Figure 19. IPI Wiring Diagram With Pvk-80 Installed (System 4)

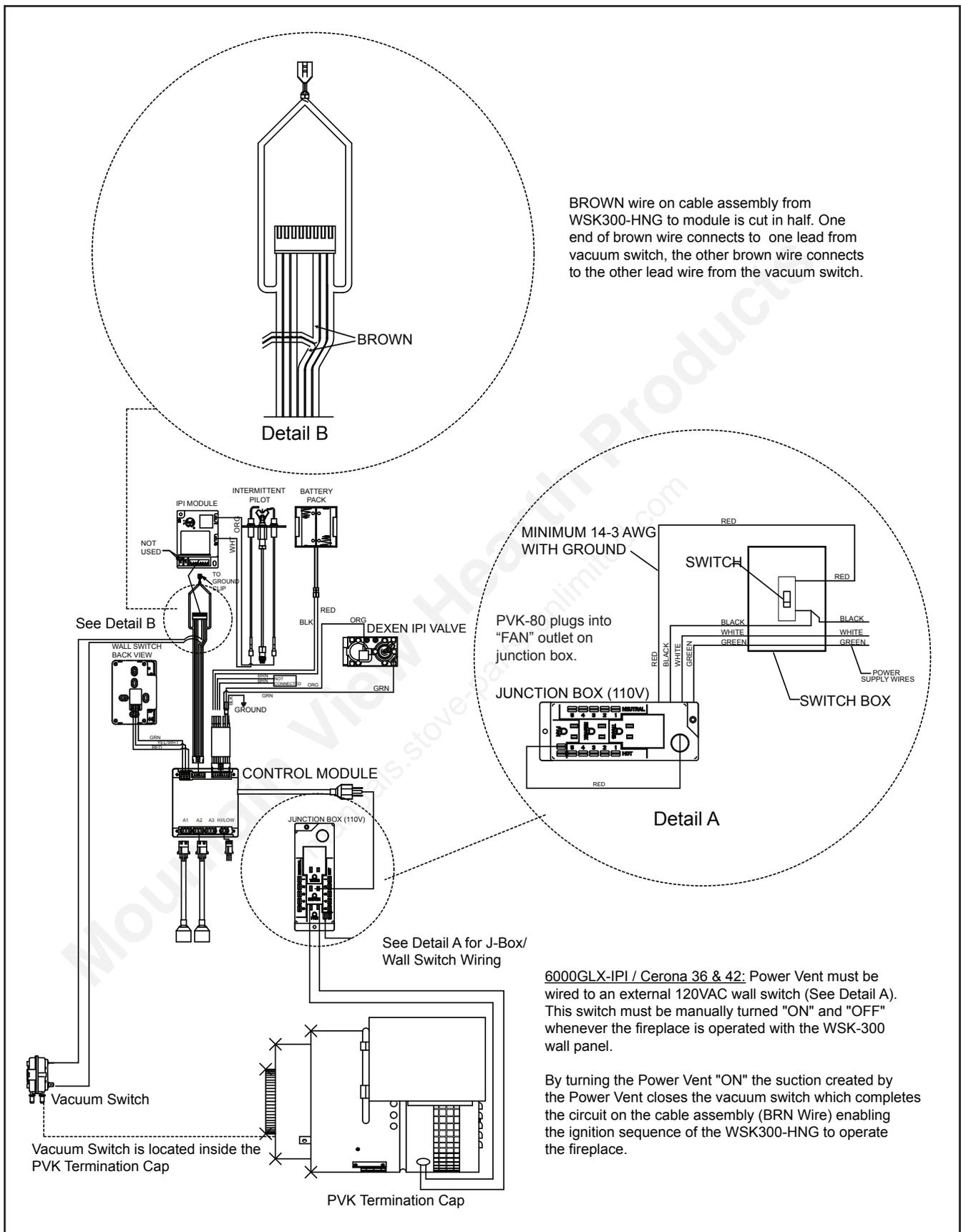


Figure 20. Wiring Diagram For WSK-300HNG

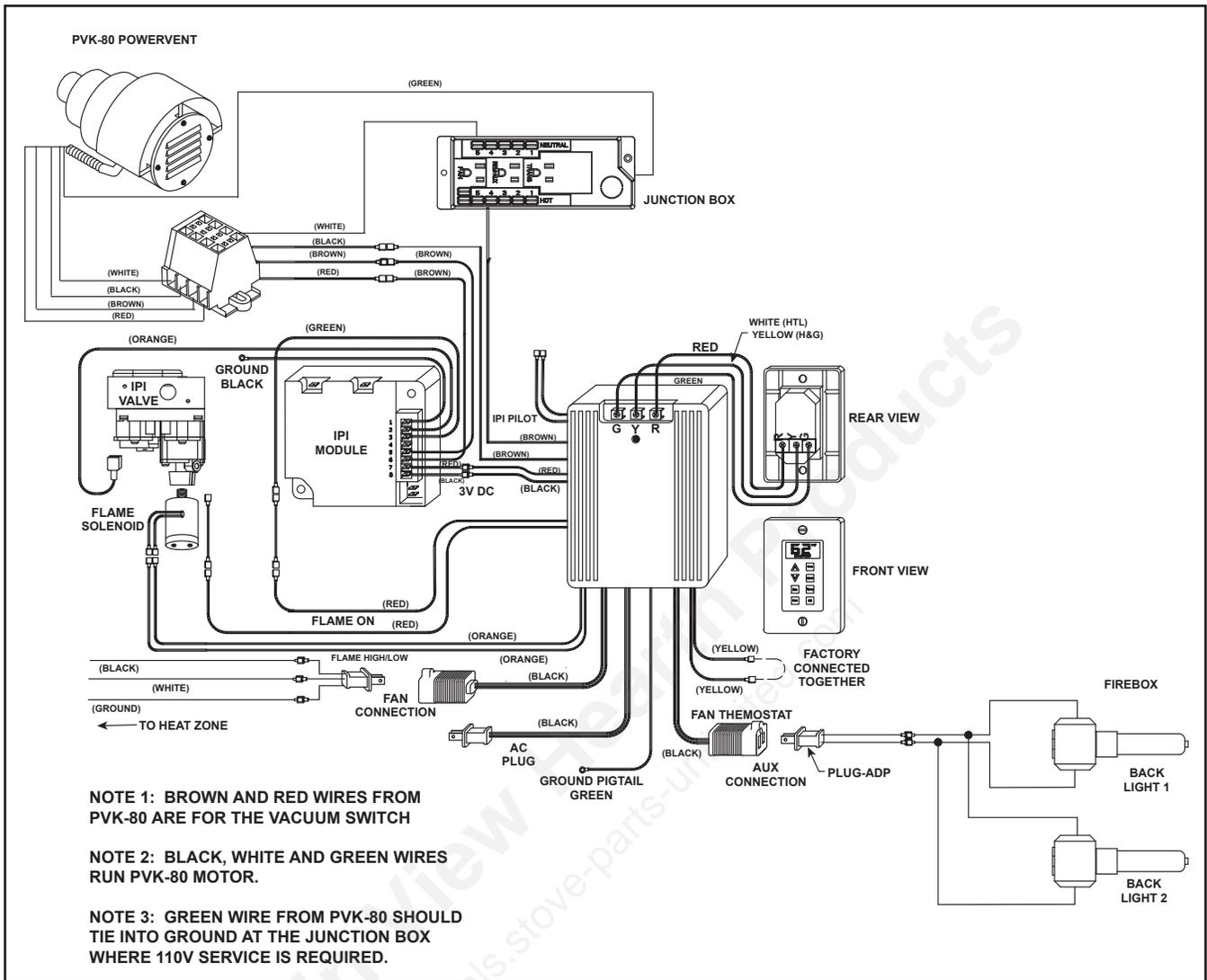


Figure 21. IPI Wiring Diagram For WSK-MLT

Please contact your Hearth & Home Technologies dealer with any questions or concerns.  
 For the location of your nearest  
 Hearth & Home Technologies dealer,  
 please visit [www.fireside.com](http://www.fireside.com).